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ABSTRACT

Data are not available to inform education policy discussion regarding how resources are allocated both within and among schools. This study was conducted to develop and pilot test a questionnaire that would collect school-level expenditure data. This report describes the three site visits and focus group conducted for this project, findings from pilot tests of two versions of questionnaires (one in seven districts and one in eight school districts), and the revised instrument, the "Public School Expenditure Survey." Both pilot instruments were developed as mailed questionnaires linked to the Schools and Staffing Survey. Collecting data by the functional categories defined by the National Center for Education Statistics was the challenge that was most clearly met by the developed instrument. The instrument also shows that it is possible to collect school-level data, but the drawback is that the instrument must be fairly complex and thus creates a burden for the respondent. One appendix contains the instrument, and the other explains common errors that cause data inconsistency. (SLD)

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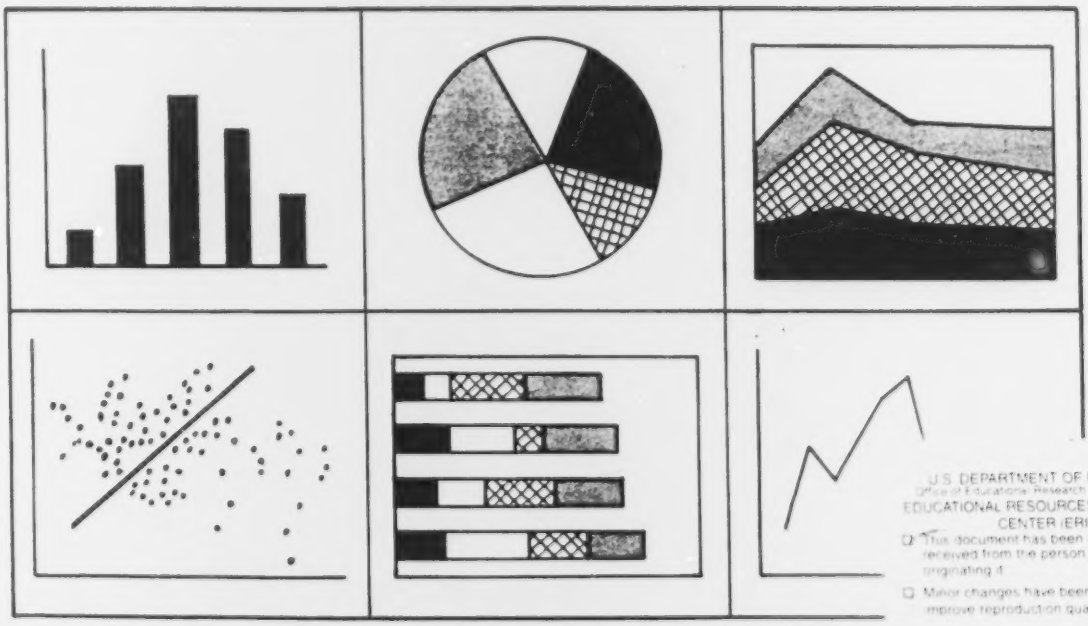
Working Paper Series

Collection of Public School Expenditure Data:

Development of a Questionnaire

Working Paper No. 98-01

January 1998



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Collection of Public School Expenditure Data:

Development of a Questionnaire

Working Paper No. 98-01 January 1998

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January 1998

Foreword

Each year a large number of written documents are generated by NCES staff and individuals commissioned by NCES which provide preliminary analyses of survey results and address technical, methodological, and evaluation issues. Even though they are not formally published, these documents reflect a tremendous amount of unique expertise, knowledge, and experience.

The ***Working Paper Series*** was created in order to preserve the information contained in these documents and to promote the sharing of valuable work experience and knowledge. However, these documents were prepared under different formats and did not undergo vigorous NCES publication review and editing prior to their inclusion in the series. Consequently, we encourage users of the series to consult the individual authors for citations.

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Collection of Public School Expenditure Data:

Development of a Questionnaire

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Office of Educational Research and Development
National Center for Education Statistics

January 1998

Executive Summary

School-level data on public school expenditures are not generally available to inform education policy discussions regarding how resources are allocated both within and among schools. In short, data are not available to answer issues of:

- **Resource Allocation and Productivity.** How do schools allocate resources? How much is spent on instruction and how much on administration? What is the relationship between school expenditures and student outcomes?
- **Equity and Adequacy.** How much variation is there in per-pupil expenditures among schools?
- **Accountability.** How do per-pupil expenditures and resource allocations in my child's school compare to expenditures in similar schools?
- **School-based Management.** Can school-level finance data be used to inform school management decisions?
- **Congressional Interests and Public Inquiries.** How much is spent on administrative expenditures? How much on electronic technology and other types of equipment?

Because of interest in collecting data to answer these questions, NCES contracted with the Pelavin Research Center of the American Institutes for Research (AIR) to develop and pilot test a questionnaire that would collect school-level expenditure data.

This report describes the site visits and focus group conducted for this project, findings from pilot tests of two versions of questionnaires, and the revised instrument, the *Public School Expenditure Survey* that is presented in Appendix A. The development efforts reported here were grounded in AIR's work on developing a similar private school finance survey.[1] Both instruments were developed as mailed questionnaires linked to the Schools and Staffing Survey (SASS), based on a tentative decision made at an early planning meeting in September 1996.

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[1]See Isaacs, J., Garet M., and Sherman, J. *Collection of private school finance data: Development of a questionnaire.* NCES Working Paper No. 97-22, July 1997.

The task of designing a mailed survey instrument to collect detailed, school-level financial information is a challenging one, for several reasons.

- First, the instrument must collect expenditure data by the standard NCES function and object categories, even though many district and state accounting systems do not follow this accounting framework completely.
- Second, the instrument must be able to collect expenditures associated with a selected school — despite the fact that the district-wide accounting systems of many districts do not directly track expenditures to specific school sites.
- Third, the instrument, while providing a thorough picture of school-level expenditures, should not place an undue burden on respondent districts. If the instrument is perceived as too demanding of staff time, then the response rate will suffer, and the overall validity of the instrument will become open to question.

The first and third challenge are common to both the public and private school instruments. The second challenge, however, is unique to the public school questionnaire, and poses the most significant challenge to the success of this project.

Site Visits and Focus Groups

From the outset, future respondents — district business officers — were involved in the design of the questionnaire. AIR staff consulted with district business officers by conducting site visits to three local districts and by convening a focus group of school finance officials from five local school districts.

In both the site visits and focus group, district business officers were presented with a draft framework of a possible site-level finance survey. This draft framework had seven functional categories, four object categories, and three location categories, as shown in Exhibit II, presented below, as well as on page 8 of the full report. There was concern that districts might be unable to report expenditures by location, and specifically, might be unable to report school-site expenditures for specific school locations, because of the nature of their district-wide accounting systems. The basic purpose of the site visits and focus group was to determine whether school districts would be able to provide data by the desired functions, objects, and locations.

EXHIBIT II

Proposed Functions, Objects, and Locations

Proposed functions
Instruction
Support for students and instructional staff
Administration
Operations and maintenance
Transportation
Food services
Other

Proposed objects
Salaries
Benefits
Supplies and contracted services
Equipment

Proposed locations
Central-office expenditures
School-site expenditures at specific school locations
Expenditures at unspecified locations

The most encouraging result of the site visits and focus group was that all the participating districts reported that they would be able to complete a school-level expenditure survey. Officials in all three site visits said that their accounting systems had the capability of providing the information — but that it would require some work, primarily programming work. Focus group participants also reported having the capability to track school-level expenditures and the ability to re-categorize expenditures, if necessary. In fact, they argued that in addition to collecting data by function, object, and location, the survey should collect data by program — and in particular, data about expenditures for special education programs.

Pilot Tests

Using information and suggestions from the site visits and focus groups, a pilot test version of the *Public School Expenditure Survey* was drafted and mailed to eight school districts in March 1997. A second pilot test survey was sent to an additional seven districts in July 1997.

A total of 8 of the 15 districts in the two pilot tests completed the survey, for an overall response rate of 53 percent. Larger school districts appeared more likely to respond than smaller districts. Several of the non-respondents cited length and complexity of the survey as a reason for non-response.

The reported time spent on survey completion varied widely, from a low response time of one hour to high response times of 26 and 30 hours. The mid-range response times included 3 hours (two respondents), 4.5 hours (one respondent) and 9 hours (2 respondents).

During telephone debriefing interviews, respondents explained that the most time-consuming part of the survey was splitting expenditures across functions. To address this, the final version of the survey combined two functional categories associated with instruction-related support into one category.

Respondents also found it difficult to report certain types of school-level data. Specifically, while they generally could report school-level data for one selected school, they did not report comparable data for all schools in the district. This latter data element, which was requested in the pilot test versions of the survey, was dropped in the revised survey instrument in an effort to eliminate a common source of data inconsistency.

Description of Survey Instrument

In the revised questionnaire, developed on the basis of the results of the pilot tests and appended to this report, each sampled district is asked to report operating expenditures for the district as a whole in Item 1, using the set of function and object categories shown in Exhibit II. In Item 2, districts are asked to report *central-office* operating expenditures. School-based expenditures are the focus of Item 3. For all three items, districts are asked to report wages and salaries in one column, and supplies and contracted services in a second column.

Central-office expenditures concern activities associated with coordination of support services for instructional staff and pupils, central-office administration, and coordination of operations and maintenance.

All expenditures other than central office operations are defined as school-based expenditures. To accommodate the diverse capabilities of district accounting systems, school-based expenditures in item 3 are reported in two tables:

- **Table A: Actual Expenditures at Selected School.** Districts are asked to report actual expenditures for the selected school in Table A to the extent that such expenditures are known and tracked to that specific school site. Respondents are instructed to report zeros in Table A if the district's accounting system does not track any expenditures to specific school locations.

- **Table B: Expenditures at Unspecified Locations.** Districts are to use Table B to report any expenditures for school-based services that are not assigned to any particular school or location. This might include itinerant staff (e.g., itinerant music teachers), personnel or materials used in schools on an "as-needed" basis (e.g., psychologists, maintenance workers), or personnel or materials associated with school-based services but which are accounted for under a central office location (e.g., nurses coded to central location, centrally-billed utilities). Table B includes all expenditures other than central-office expenditures if a district's accounting system does not track any expenditures to specific school locations.

An estimate of the operating expenditures for each school in the district's sample may be obtained by summing the reported expenditures under Table A*: Actual Expenditures at the Selected School* and the school's proportional share of overall district expenditures under Table B: *Expenditures at Unspecified Locations*. To ease response burden and maintain data comparability, the questionnaire does not ask districts to carry out the calculations necessary to allocate a share of Table B: *Expenditures at Unspecified Locations* to each target school. Instead, enrollment and other basic data for the district and the selected school are collected, in Item 7, allowing NCES to perform the necessary calculations in a consistent manner during data cleaning and analysis.[2]

[2]Depending on the purpose of the analysis, central-office expenditures can also be allocated to target schools, based on student enrollment or other criteria.

The next three items of the questionnaire request information about equipment for the district as a whole (Item 4), the central office (Item 5), and the selected school (Item 6). As stated above, Item 7 of the questionnaire requests contextual information for the selected SASS school and the district as a whole. Item 8 requests employee benefits across the entire district. Respondents are provided the opportunity of reporting additional benefits paid by the state or local jurisdiction. Item 9 collects the principal and interest expenditures for long-term debt service. Finally, item 10 asks the respondent to report the extent to which expenditures for Title I and other grant-funded programs are included in expenditures reported in items 1-9.

Conclusion

This project has met with mixed success with regard to meeting the three challenges listed on page viii. The first challenge — collecting data by the NCES functional categories — is perhaps the easiest and that one that has been most clearly met. The instrument presented in Appendix A follows a simplified form of the standard NCES categories, and respondents appear generally able to report expenditures across these categories. It is important to note, however, that splitting expenditures across the NCES functional categories is a time-consuming task for some respondents. Although modifications made to the final survey are expected to reduce the time burden, this cannot be determined without further field-testing.

With regard to the critical challenge of collecting school-level data, the instrument has shown that it is possible to collect school-level data across a diverse array of districts. This is an important achievement. Results from the pilot tests suggest that some districts can report expenditures in this framework without great difficulty. Other districts, however, find it hard to report data across different locations in a manner that preserves the internal consistency of the reported data. Again, modifications were made to the revised survey instrument in an effort to

improve data consistency, but the success of these modifications cannot be judged until further field-testing.

Finally, in designing and instrument that meets the first two challenges, AIR has been forced to design a fairly complex instrument that creates a burden for the respondent. Although modifications made to the final instrument are expected to shorten the average response time, perhaps significantly, it is clear that a public expenditure survey of this type places a reporting burden on respondents.

An increasing number of states and districts are moving toward financial systems that account for expenditures at the school level. Over time, an increasing number of districts should be able to provide complete school-level data without spending undue amounts of time on survey completion. At this point, as states and districts are in the early stages of developing school-level data systems, the attached *Public School Expenditure Survey* offers an instrument for collecting a mixture of district and school-level data to make maximum use of the data available to yield information about resource allocations within and across schools.

Acknowledgments

The authors wish to thank all those who contributed to the development of the *Public School Expenditure Survey* and the completion of this report.

Our special thanks go to the district staff in Anne Arundel County, Maryland; Arlington County, Virginia; Carroll County, Maryland; Charles County, Maryland; Fairfax County, Virginia; Frederick County, Virginia; and Loudoun County, Virginia, who gave of their time and expertise during the early stages of the site visits and focus group. Our greatest debt, however, is to the 15 anonymous district business officers and their staffs, who took the time to participate in the two pilot tests and follow-up telephone interviews. Without them, we could not have completed the project.

We also wish to acknowledge the guidance and contributions provided by staff at the National Center for Education Statistics. Special mention goes to our Project Officer, Steve Broughman, for his support and guidance of the project and the report. The project also benefited from the involvement of William Fowler, Dan Kasprzyk, Paul Planchon, and Mary Rollefson, who assisted in developing the goals of the project, reviewing earlier drafts of the report, and making important suggestions that improved the final project.

This project was conducted under a contract with the Education Statistics Services Institute, which provides program services and direct support to NCES. We thank ESSI staff for their assistance in conducting the project. Finally, we thank Sterlina Harper of the American Institutes for Research, for her skillful assistance in preparing the graphics and text of both the questionnaire and the report.

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Introduction

The National Center for Education Statistics (NCES) is responsible for collecting, analyzing, and disseminating data on a wide range of educational topics and issues. One important area of study is school finance. NCES has two main sources for finance data for elementary and secondary education — the National Public Education Financial Survey (NPEFS), which collects information annually from state education agencies, and the Annual Survey of Local Government Finances — Schools Systems, more commonly known as the F-33, which collects finance data for school districts. Although these state- and district-level collections provide policy makers with important information about the allocation of educational expenditures at the state and district levels, they do not provide information about resource allocation at the school level. Consequently, data are not available to inform education policy discussion regarding how resources are allocated both within and among schools. In short, data are not available to answer issues of:

- **Resource Allocation and Productivity.** How do schools allocate resources? How much is spent on instruction and how much on administration? How much is spent on school-site services as compared with central office operations? How are per-pupil expenditures and resource allocations affected by school characteristics, such as staffing patterns or program offerings? How are they affected by state policies and funding decisions? What is the relationship between school expenditures and student outcomes?

- **Equity and Adequacy.** How much variation is there in per-pupil expenditures among schools? How much variation is there across a state, or across similar types of schools in different states around the nation? Are fiscal resources distributed in an equitable manner? Are resource levels adequate to educate students with various needs?

- **Accountability.** How do per-pupil expenditures and resource allocations in my child's school compare to expenditures in similar schools? Are resources spent as intended?

- **School-based Management.** Can school-level finance data be used to inform school management decisions?

- **Congressional Interests and Public Inquiries.** How much is spent on administrative expenditures at the school and district levels? How much on electronic technology and other types of equipment? How much on special education programs? What are the appropriate levels for school vouchers?

Because of interest in collecting data to answer these questions, NCES contracted with the Pelavin Research Center of the American Institutes for Research (AIR) to develop and pilot test a questionnaire that would collect school-level expenditure data.

This report describes the activities undertaken by the American Institutes for Research to develop a public school expenditure survey. The first section of the report provides background on the development of the questionnaire. The second section describes the process of consulting with school district business officers through site visits and focus groups. Results of pilot tests of various versions of the questionnaire are described in the third section. The fourth section contains a detailed discussion of the items in the revised survey instrument, the *Public School Expenditure Survey,* which is appended to this final report. This questionnaire is ready for larger-scale filed-testing and possible inclusion as a follow-up questionnaire to the next Schools and Staffing Survey (SASS).

I. Background

The task of developing a questionnaire to collect school-level finance data is one of a series of tasks undertaken by the American Institutes for Research (AIR) to examine alternative strategies for collecting finance and resource data from public and private schools. Initially, the Pelavin Research Center of AIR was asked by NCES to explore strategies for collecting finance data from *private* elementary and secondary schools, to address the lack of national data on private school finances. After exploring, and ultimately rejecting, the possibility of extrapolating national expenditures from data collected by three major associations of private schools[1], the American Institutes for Research explored the feasibility of collecting data through a new instrument

[1]See Garet, M., Chan, T., Isaacs, J., and Sherman, J., *The determinants of per-pupil expenditures in private elementary and secondary schools: An exploratory analysis,* NCES Working Paper 97-07, March 1997; and Garet M., Chan, T., and Sherman, J. *Estimates of expenditures for private K-12 schools*, NCES Working Paper 95-17, May 1995.

developed with the assistance of private school administrators and representatives of private school associations. In the spring of 1996, Isaacs, Garet and Sherman developed and presented three preliminary instruments that could be used to collect finance data.[2] The third, and most detailed, survey instrument collected expenditure data by both functional category (instruction, administration, maintenance, etc.) and by object (salaries, benefits, supplies, etc.), following a simplified version of the "function by object matrix" used in the NPEFS and the F-33. In the fall of 1996, NCES asked the American Institutes for Research to refine and pilot test the function-by-object private school finance questionnaire.[3]

At the same time, NCES charged the American Institutes for Research with a second task, to develop a corresponding questionnaire for collecting school-level expenditure from public schools. Development of this second questionnaire would allow comparisons between public and private schools. Furthermore, it allowed exploration of one possible way to respond to the Congressional directive to develop a model data system to yield information about school and district spending on administration.

The task of designing an instrument to collect detailed, school-level financial information is a challenging one, for several reasons.

- First, the instrument must collect expenditure data by the standard NCES function and object categories, even though many district and state accounting systems do not follow this accounting framework completely.
- Second, the instrument must be able to collect expenditures associated with a selected school — despite the fact that the district-wide accounting systems of many districts do not directly track expenditures to specific school sites.
- Third, the instrument, while providing a thorough picture of school-level expenditures, should not place an undue burden on respondent districts. If the instrument is perceived

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[2]See Isaacs, J., Garet, M., and Sherman, J., *Strategies for collecting finance data from private schools.* NCES Working Paper No. 96-16, June 1996, for a full report of these activities.

[3]See Isaacs, J., Garet, M., and Sherman, J. *Collection of private school finance data: Development of a questionnaire.* NCES Working Paper No. 97-22, July 1997.

as too demanding of staff time, then the response rate will suffer, and the overall validity of the instrument will become open to question.

The first and third challenges are common to both the public and private school instruments. The second challenge, however, is unique to the public school questionnaire, and poses the most significant challenge to the success of this project.

Linkages to the Schools and Staffing Survey (SASS)

At an early planning meeting, a tentative decision was reached to develop the public and private school instruments as mailed questionnaires that would be linked to the Schools and Staffing Survey (SASS). SASS already collects a rich assortment of data on the characteristics of both public and private elementary and secondary schools, but it contains little financial data, with the exception of teacher and administrator salary schedules and benefits. The addition of school-level finance data to the SASS data collection would permit several important types of analyses of relationships between expenditures and school characteristics.

- First, linking expenditure data with staffing data makes it possible to determine the extent to which spending differences across schools are a function of staff size and composition, that is, the extent to which differences in per-pupil expenditures can be explained by differences in teacher/pupil ratios, administrator/pupil ratios, or other ratios between school-level staff and students. Analyses of relationships between staffing and expenditures are critical to understanding public-private differences in spending. Furthermore, by linking salary data by function (e.g., instruction or administration) with staffing data by function, it is possible to estimate school-level average salaries by function.

- Linking expenditure data with information on school programs and services (e.g., the number of students in special education programs, the number of children in English as a Second Language programs) makes it possible to gain an improved understanding of the relationship between program offerings and expenditures.

- Linking expenditure data with information on school organization makes it possible to examine the role of organizational arrangements in explaining variation across schools in spending patterns. For example, to what extent to spending patterns differ between public and private schools? Among public schools, how do spending patterns differ among regular schools, magnet schools, or charter schools? How do spending patterns differ in schools in more or less centralized districts?

- Finally, linking data on expenditures on other data from SASS makes it possible to examine the relationship between school spending and specific school outcomes — for example, reported graduation rates, college-going rates, absenteeism, controlling, insofar as possible, for the characteristics of students enrolled. Although the SASS does not contain data on student achievement, a long-term goal of the collection of finance data would be to link expenditures with achievement outcomes.

It is important to note that the addition of finance data to the SASS is just one of several options under consideration for the redesign the SASS. Of most relevance to this project is an activity being undertaken by AIR's John Flanagan Research Center, located in Palo Alto, California, to develop recommendations for modifying the SASS to collect additional data about school resources, primarily school staffing patterns and staffing costs. Coordination between the two activities is important so that the finance data, collected from business offices, and the resource (staffing and salary) data, collected through additional questions on the teacher, school and district surveys, can provide complementary information to improve knowledge about school costs and patterns of resource allocation.

In addition to the analytical advantages of collecting the finance data through the SASS, there are practical considerations of survey administration. One issue concerns the appropriate sample size. For policy-makers interested in the equity of resource allocations within a district, the preferred sample is all schools within a district, to allow intra-district comparisons of spending patterns. Collecting data on all 80,000 schools across the nation, however, could be quite costly, both for the Federal government and for the respondents. It would be considerably cheaper to collect data from a sample of schools, perhaps 800 to 1,000 as does the Fast Response Survey System. Although such a sample would permit reliable national estimates of spending patterns, it would not allow analysis of state spending patterns. The larger SASS sample of close to 10,000 schools is a good compromise between administration of the survey to the entire universe and a national sample. The SASS data, while not lending itself to analyses of intra-district equity concerns, would permit analysis of spending patterns within and across states.

A related issue involves respondent burden and response rate. Of primary concern is whether adding questions on finance to the SASS would lower the overall response rate. This could become an issue simply because of the length of a finance survey that collects data by function and object and the sensitive nature of finance questions. Two factors, however, may alleviate this concern. First, the finance survey should be administered, ideally, during the school year following the administration of the main SASS instruments. Thus if the SASS is administered in the fall of 1999, with questions about school characteristics pertaining to the 1999-2000 school year, the finance survey should be administered in the fall of 2000, when financial records of actual expenditures for 1999-2000 are available. In this way, the finance data would cover the same school year as the data on school staffing and characteristics. Furthermore, the negative effects of a potentially low response rate to the finance questions would not contaminate the overall SASS administered a year earlier.[4] Second, for the public school questionnaire, the appropriate respondent would be a person in the business office of the district in which the SASS sample is located — not a respondent to the main body of the SASS instruments.

In order to minimize the burden of the questionnaire, the American Institutes for Research made an effort to involve future respondents in the questionnaire design. Following the strategy used in developing the private school questionnaires, AIR began the development of the public school questionnaire by conducting a series of site visits and focus group interviews with local administrators. The purpose of these activities was to learn more details about the budgetary arrangements and accounting practices of public schools, as well as to gauge how potential respondents react to different frameworks for the data collection. Because of the tight time frame of this project, there were only two months to conduct these interviews (as compared with more than

[4]Administration of the finance questionnaire in the year following the regular SASS also opens up the possibility of sampling a sub-set of the larger SASS sample, if administration to the entire SASS sample proved too costly. Such a sub-set might, however, preclude analyses by state.

six months for the earlier private school project). In this time frame, three site visits and one focus group were conducted. The major findings of these activities are outlined below.

II. Site Visits and Focus Group

Site visits were conducted with district financial officials from two school districts in Virginia (Arlington County and Fairfax County) and one district in Maryland (Charles County). A focus group was convened on February 27, 1997 at AIR's Pelavin Research Center in Washington, DC, involving school finance officials from three school districts in Maryland (Anne Arundel County, Carroll County, and Frederick County) and two school districts in Virginia (Fairfax County and Loudoun County). Although the districts were drawn to include a mixture of counties, including suburban counties close to the metropolitan Washington, DC area and more rural counties in Maryland and Virginia, it turned out that all participating districts were quite large. They ranged in size from Arlington County, with an enrollment of 16,500, to Fairfax County with an enrollment of 145,000 students. A list of districts involved in the site visits and focus groups is included in Exhibit I.

EXHIBIT I

Districts Represented in Site Visits and Focus Groups

District	State	Enrollment	Activity
Anne Arundel	Maryland	117,000	focus group
Arlington County	Virginia	16, 500	site visit
Carroll County	Maryland	26,000	focus group
Charles County	Maryland	20,000	site visit
Fairfax County	Virginia	145,000	site visit and focus group
Frederick County	Maryland	33,000	focus group
Loudoun County	Virginia	29,900	focus group

In both the site visits and the focus groups, district business officers were presented with a draft framework of a possible site-level finance survey. In brief, this framework contained three dimensions. In addition to classifying expenditures by function and by object, as in the private school questionnaire, the framework distinguished expenditures at school and central-office locations. In fact, the major challenge of this project was to determine the extent to which school district accounting systems were able to provide data for individual schools within the district. The first draft of the AIR framework had seven functional categories, four object categories, and three location categories, as shown in Exhibit II. The functions and objects were drawn from the more detailed set of functions and objects used in the NPEFS and F-33, and defined in *Fundamentals of Financial Accounting for Local and State School Systems* (NCES, 1990).

EXHIBIT II

Proposed Functions, Objects, and Locations

Proposed functions
Instruction
Support for students and instructional staff
Administration
Operations and maintenance
Transportation
Food services
Other

Proposed objects[5]
Salaries
Benefits
Supplies and contracted services
Equipment

Proposed locations
Central-office expenditures
School-site expenditures at specific school locations
Expenditures at unspecified locations

[5]The AIR framework proposed to obtain full function by object data for the objects of salaries, and supplies and contracted services, with less detail collected for benefits or equipment.

A fourth possible dimension is programs, such as special education programs, vocational programs, bilingual education programs. These were not included in AIR's initial draft framework, because of the complexity of a four-dimensional framework.

The basic purpose of the site visits and focus group was to determine whether school districts would be able to provide data across these three dimensions. The protocols for the site visits and the focus group addressed five general areas:

- **Categories used in accounting systems.** Questions probed how difficult it might be for districts to report expenditures by function and object. Another area concerned the degree to which expenditures were classified by program (e.g., regular education, special education, bilingual programs).

- **Capabilities for school-level accounting.** Of major concern was finding out to what extent districts could track expenditures to the school level. More specifically, questions probed what types of expenditures could typically be tracked to the school level and what types could not be. There also was interest in how site-level financial information is used.

- **Specific issues related to school-level accounting.** Questions concerned how specific items were accounted for at the school- or district-levels (i.e., itinerant teachers, utilities, transportation, food service, benefits).

- **Other issues.** Questions addressed specific accounting practices that could complicate the collection of finance data, such as distinctions between general operating and capital funds. Many of the questions in this area were based on AIR's experience with the diversity of ways that private schools handle such matters.

- **Perceived response burden.** The questions concerned who would be the appropriate respondent(s), the use of budgeted or actual expenditures, the estimated time to complete the survey, best times of year for survey administration, and likely problems and potential benefits of the survey.

Each of these areas was discussed during each of the three site visits, and again during the focus group.

Categories Used in Accounting Systems

During the site visits and focus group, AIR staff learned that the districts from Maryland used a common set of budget categories, following state guidelines, whereas each district from Virginia had its own budget categories. In both Maryland and Virginia districts, the budget

categories were a mixture of what the NCES classification in the NPEFS would term as functions, objects or programs. For example:

- Expenditures in Arlington County, Virginia are recorded by what they termed as program, object, and department/unit. The nine major "programs" in the Arlington system include instructional, pupil services, administrative, plant and vehicle operations and maintenance, transportation and food services, debt service, employee benefits and training, construction, and community, state, and Federal programs. [6]

- Charles County, Maryland maintains the three major accounting codes of category, program, and object. Its 13 main "categories" include instruction, student personnel services, health services, administration, operations, maintenance, food services, transportation, fixed charges (benefits), community services, special education, capital outlay, and debt service (principal and interest).[7]

- The ten "programs" in the Fairfax County, Virginia system are a mixture of NCES functions and programs, including instruction, site support, instructional support, student services, central administration, general support, transportation, capital (equipment), debt service, and other funds.

The categories used in Fairfax County, as well as major categories of other districts in the focus group, are summarized in Exhibit III.

One interesting finding of the site visits and focus groups is that most local accounting systems treat benefits as a separate budget category (sometimes called "fixed charges"), rather than as an object such as salaries or supplies. The implication of this treatment of benefits is that districts are unlikely to be able to report benefits across the various functions with much accuracy. One district that did treat benefits as an object across functions, Fairfax County, reported that benefits were not based on actual fringe benefits, but on salaries multiplied by 28 percent. For this reason, subsequent versions of the questionnaire were limited to collecting data on total benefits.

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[6]The objects in the Arlington system are salaries for professional employees, salaries for scale employees, administrative supplies and services, general supplies and services, plant and operations supplies and services, food and transportation, equipment, and construction.

[7]The objects included in the Charles County system are salaries, contracted services, supplies, fixed charges (benefits), and transfers. The "fixed charges (benefits)" object appears only under the "fixed objects" category; and benefits are not allocated across various categories (i.e., to instruction or to administration).

EXHIBIT III

Functional Categories of Districts in Focus Group

AIR's instrument	Maryland districts	Loudoun County, Virginia	Fairfax County, Virginia
Instruction	Instruction[8]	Instruction[9]	Instruction
	Special education		
Support services for instructional staff and pupils (libraries, staff development, health, counseling)	Student personnel services --- Health services		Instructional support --- Student services (health, counseling, special ed.) --- Site support (custodian, library)
Administration	Central administration	Administration and Health and Attendance	Central administration
Operations & maintenance	Operation of Plant --- Maintenance of Plant	Operations & maintenance	General support
Food service	Food Service	Food service	
Transportation	Transportation	Transportation	Transportation
	Fixed charges (benefits, rentals)		
	Capital outlays	Facilities (construction)	Capital (equipment)
Long-term debt service	Debt service	Debt service	Debt service
Non-school programs (extended day, etc.).	Community service		Separate funds for adult education, summer school

Focus group participants raised an additional concern about benefits -- the issue of benefits that may be paid directly by the state. For example, until four years ago, Maryland paid the FICA directly. One participant noted that he knows how much the state pays into retirement funds,

[8]Instruction in Maryland counties included principals at the time of the focus group. As of school-year 1997-1998, principals will be reported under Maryland's new category of "mid-level administration." There also will be a separate category for textbooks and classroom supplies.

[9]Instruction includes library and counseling services in Loudoun County, Virginia.

because he sends them the necessary payroll records monthly. An item on city, county and state benefits was added to the questionnaire in response to this concern.

Participants in both the site visits and the focus group said that although their district's budget categories were quite different from AIR's proposed categories, they each had a computerized tracking system for expenditure reports, which participants felt could be used to disaggregate and report the information by the functional categories requested in the AIR survey. In Fairfax County, Virginia, for example, officials explained that they would be able to respond to a survey instrument based on AIR's initial draft framework because their district tracks both actual and budgeted expenditures, and their financial management information system has the capability to easily reclassify expenditures.

Such reclassification would require some effort and care on the part of the respondent, however. In Arlington County, Virginia, for example, principals are coded as instructional rather than as administrative staff. (As noted in the footnote to Exhibit III, principals were also coded as instructional staff in all four Maryland counties, although this will change with a new set of state guidelines for 1997-1998). Counselors are also coded as instructional staff in Arlington, whereas the AIR survey follows NCES in defining them as support services for pupil services. While it is possible to separate administrators and counselors from teachers in the Arlington County accounting system, the preparation of the required information would require some computer programming.

Although some work is involved in reporting expenditures by function and object, this is not a new challenge. Both the F-33 and the NPEFS collect expenditures by function and object. What is new in this survey is the instruction for districts to report expenditures at the school-level for a particular school within the district.

The Role of School-Level Accounting

The districts involved in the site visits and focus groups reported a greater ability to provide school-level finance data than had been anticipated. As of 1997, only eight states collected school-level finance data, with an additional five states collecting certain elements of school-level information. At the outset of the project, AIR staff had assumed that many districts would not be able to report the expenditures of specific schools, but would know only total spending across all schools in the district. To address this situation, AIR's initial framework allowed for three levels of expenditures:

1) central-office expenditures,
2) school-site expenditures that are clearly assigned to and reported at the school-level, and
3) school-based expenditures that are accounted for centrally.

The third level is designed to accommodate the many situations where expenditures for school activities are not tracked to specific locations by the accounting system. Expenditures in this category might be quite small in districts with sophisticated school-level accounting systems, perhaps limited to items such as itinerant teachers and centrally-billed utilities. However, this category could account for the bulk of expenditures in districts that do not track any school-level activities to school locations.

All three of the site visits, however, were to districts that claimed an ability to report school-level expenditures, even though the state education agencies in Maryland and Virginia do not require reporting of school-level data. The public school district in Arlington County, Virginia, for example, maintains a detailed, on-line, interactive accounting system that records location codes for nearly all expenditures. As discussed above, expenditures are coded by program, object and department. The "departments" include elementary and secondary school sites, as well as the following central administrative units: the school board, the superintendent's office, and the offices of community

services, instruction, administrative services, student services, personnel, finance, school- and county-shared buildings, as well as facilities and operations. Note that all of the departments, with the exception of elementary and secondary school sites, are considered to be district-level. As a result, some expenditures that AIR would conceptualize as school-level are included in district-level departments in the Arlington County system. All employee benefits, for instance, are coded as central personnel office expenditures, including the benefits paid to school-site staff.

Fairfax County officials said that they would have little difficulty completing a school- and district-level questionnaire because of the capabilities of their financial management information system. They noted, for example, that their system has the capability to proportionally allocate salaries of teachers who rotate among schools. In fact, they voiced an interest in collecting more data than that included in the initial framework. They hoped that the finance survey also would collect data on special education program costs, since they were concerned about comparing their costs with special education costs in similar districts.

In addition to asking school business officers about the capability of their accounting systems to collect and report school-level data, AIR staff asked about how such data are used in their district. Charles County maintains a data system that records most expenditures by location. During the 1995-1996 school year, the district experimented with a site-level budgeting system, in which each principal was responsible for managing the total school budget. Principals found such a system unsatisfactory, as too many expenditures (e.g., expenditures for utilities) were beyond their control. As a result, the district has returned to a more traditional budgeting system in which only expenditures for some supplies and services are managed at the school level.

One focus group participant raised a different concern about the use of school-level expenditure data. His concern was that school-level expenditures would be "skewed" in schools with a high concentration of senior employees, because of higher-than-average salary and benefit

costs. The response during the focus group was that if NCES collected such data, the data would not be published for individual schools, and that, furthermore, in a nationally representative sample, the schools with senior employees would be balanced by schools with younger employees. Moreover, other questions from SASS would capture some of the differences among teachers. In the concluding discussion, focus group participants noted that one of the advantages of school-level finance data is that the information "could be used to measure disparities." It also could provide useful "benchmarks" for school operations.

In general, participants in the focus group reported that, although they do not budget by school, they could prepare special expenditure report printouts for *particular* schools. They could track expenditures to one school in a district, but it would be overly burdensome to do so for all schools, due to the time involved. The participants noted that a smaller district with a less sophisticated computer system might encounter considerable difficulty in reporting school-level data.

School-Level Accounting by Function and Object

In addition to the discussion of general capabilities of district accounting systems, both the site visit and focus group interviews covered a range of specific issues related to collecting school finance data by function and object.

- **Instruction.** Most respondents said that they could report teacher salaries by school. Furthermore, several participants said they also easily could allocate itinerant teachers (e.g., physical education teachers) across schools. In some districts, however, such as Fairfax County, itinerant teachers generally are assigned to one of three geographic regions and may be hard to assign to a particular school.

- **Student and instructional support.** Participants reported that support staff who are assigned to serve several schools, such as psychologists, could be hard to allocate to individual schools.

- **Administration.** As discussed above, several local accounting systems do not classify principals and other school-based administrators as "Administration." During the focus group, participants discussed the political pressures for reporting low expenditures for "Administration" or "District" activities. "District" and "Central Administration"

appeared to be viewed as largely synonymous terms among participants, despite the distinctions made in the AIR survey.

- **Maintenance and Operations.** Site visit and focus group participants thought that utilities and custodial salaries could be tracked to buildings fairly easily. Maintenance expenditures are more likely to be captured at the district level (e.g., plumbers, painters, electricians, snow removal, grass clipping, glaziers). The participants viewed these as school-level expenditures that could be allocated to schools by formulas. One district reported allocating custodial services by a combination of student membership, staffing, and square footage. However, maintenance was allocated by square footage only.

- **Transportation.** During the focus group discussion, there was disagreement over whether transportation is a school or district expenditure. One participant argued strongly that the problem of getting the child to the school grounds is very different from educating him or her once inside. The fact that many districts contract out for the majority of bus services (with details of service being less available to the district business officer) was viewed as an additional reason to consider it a district-level expenditure. Other participants accepted the possibility that a formula could be used to allocate transportation expenditures to individual schools. Most participants had computerized systems for counting the number of students on each bus route during the first 30 days of school while routes were being rearranged. An alternative suggestion was to ask for reports on total enrollment, transported enrollment, and walker enrollment for the selected school and district. average daily ridership, which was calculated by taking a rider count one day during the school year.

- **Food Service.** All business officers in the site visits and focus groups considered food service separate from other school expenditures and did not think it should be included in operating expenditures or in per-pupil costs. Districts are not permitted to transfer any profit from the separate food service enterprise fund into other school operations. None of the schools represented transferred expenditures from "overall school operations" into "food service." Despite their view of food service as a separate operation, participants did have the capability of reporting gross and net expenditures for food service operations, and suggested that such expenditures could be allocated to schools by counts of free/reduced price meals served.

Other Issues

During the site visits and focus groups, two other issues were explored affecting the design of a questionnaire to collect expenditure data. The first issue concerns what types of expenditures to include in the total expenditures reported by the district. The second concerns whether or not to request information on expenditures for special education and other programs that cut across the function and object matrix.

In addition to the general operating fund, districts often had additional funds. In Arlington County, for example, the additional funds included: the community activities fund (which includes expenditures for activities such as extended day programs and district swimming pools), the debt service fund, the food service fund, and the capital projects funds. The existence of these funds points out to the importance of taking care in the instructions to specify what types of expenditures are to be included and what are to be excluded.

As discussed above, district business officers advised the exclusion of food service expenditures from the survey, because of the separate nature of the food service and general operating funds. Because of interests in comparing public and private schools, however, the authors of this report think it preferable to collect data on food service expenditures as a separate line-item in both surveys, so that they can be included or excluded, depending upon the analysts' purposes.

Another tentative decision after the focus groups and site visits was to exclude community services (e.g., extended day programs and swimming pools) and capital projects. All focus group participants indicated that they could exclude expenses from extended-day programs from regular school programs, as well as expenses for other "community service" programs such as parades, library exhibits, and transporting parochial students. AIR staff also hoped, initially, to exclude "summer school," in order to collect data comparable to the private school questionnaire. Although all participants reported that they were able to "separate out" summer school expenses, they often considered them part of regular school operations, following the treatment in the NCES Accounting handbook. In Charles County, for example, summer school is counted as one of the "programs" or school subjects such as art, English, and mathematics.

The AIR questionnaire does include questions about debt service and about equipment. With regard to equipment, it is important to note that the public school districts in interviewed for this study made most equipment purchases from the general operating fund rather than from a separate

equipment fund. All districts represented in the interviews recorded the full cost of most equipment purchases in the year purchased. No depreciation was recorded. Although equipment purchases often are mixed in with other purchases in the operating budget, respondents reported that they could be disaggregated for the purpose of responding to the AIR survey, although not in the same detail as other expenditures.[10]

During two of the site visits, AIR staff discovered that district business officers excluded Title I and other Federal programs from their reports of total expenditures. In Arlington County, special Federal and state programs, including Title I, are not included in the operating fund, but are accounted for in separate restricted accounts, which are not recorded at the school level. Those expenditures also are generally not included in per-pupil expenditure calculations. Likewise, in Charles County, Federal revenues, as well as food service revenues and expenditures, are ordinarily excluded from statements of total and per-pupil expenditures. The fact that some accounting systems exclude Title I and other Federal programs from general expenditure reports indicates the need for explicit instructions or questions about Title I and other Federal grant programs in a public school expenditure survey in order to ensure comparability of data.

A final issue that was discussed in the site visits and the focus groups was the issue of gathering information about expenditures for special education and other programs. Focus group participants stated that special education costs were often 10 times higher than regular education, and so needed to be "split out" in order to "make the statistics meaningful." In particular, they maintained that Instruction, Instructional and Student Support, and Transportation should have separate components for regular and special education. The group generated a list of other programs that could be split out in the survey, including:

- Career Technology (vocational education),

[10]It is interesting to note that the definition of "equipment" varied among the districts, with dollar thresholds to distinguish "equipment" from "supplies" ranged from $250 to $2,500.

- Title I/Compensatory Education,
- Bilingual and ESL Programs, and
- Gifted and Talented Programs.

Focus group participants were asked to rank the importance of data collection for each program, because it might be too burdensome to ask respondents to report data for each program separately. They placed the highest priority on collecting expenditure data for special education programs, followed by career technology (vocational education) programs. As a result of these comments, AIR expanded the proposed questionnaire by adding items related to special education program costs. The AIR proposed questionnaire does not distinguish, however, between vocational education and other education programs, in order to maintain simplicity in survey design and minimize respondent burden.

Perceived Response Burden

At the end of each site visit and the focus group, business district officers were asked about the capability of their district's accounting systems to provide the information needed to complete the proposed questionnaire, and their estimate of the burden of the questionnaire. Officials in all three site visits said that their accounting systems had the capability of providing the information — but that it would require some work, primarily programming work:

- Arlington County officials noted that they have the data required to complete a detailed survey on school-site expenditures. However, because the local accounting categories differ somewhat from NCES functional categories, some computer programming would be required.

- Charles County officials also reported that they should be able to complete a survey asking for school site-level expenditures, in principle, but some computer programming would be needed to convert the categories used into the required "NCES function" form.

- Fairfax County officials said that because of the capacities of their financial management information system to reclassify expenditures, they would have little difficulty completing a school- and district-level questionnaire.

Focus group participants made the following comments regarding ease or difficulty of completing the questionnaire:

- It would be easiest to complete on a diskette;
- What is hard is splitting expenditures across levels (i.e., school vs. district); and
- The distinction between "District-level" expenditures and expenditures for the function of "Administration" needs to be made repeatedly.

Estimates by focus group participants of the time needed to complete a survey included

- 2 to 4 hours,
- 4 hours,
- 4 to 8 hours, and
- more than 8 hours.

The most encouraging result of the site visits and focus groups was the fact that all of the participating districts reported that they would be able to complete a school-level expenditure survey. While estimates of the time necessary to complete this task varied considerably, all districts reported having the capability to track school-level expenditures and the ability to re-categorize expenditures, if necessary. The participants, however, cautioned that smaller districts might not have this capability. To learn more, it was necessary to conduct pilot tests involving a more diverse group of districts.

III. Pilot Tests

While it was not possible to test the ability of district administrators to respond to the survey in a representative sample of districts, it was essential to conduct a preliminary assessment as to whether districts were able to provide relevant data. Using information and suggestions from site visits and focus groups, the first pilot test version of the *Public School Expenditure Survey* was produced on March 21, 1997. This pilot test survey form was mailed to eight school districts.

Debriefing interviews were conducted by telephone with the respondents in April and May 1997, and revisions were made on the basis of their comments. A May 15, 1997 version was submitted to NCES with a draft final report. Minor additional revisions were made to the questionnaire, and a second pilot test version was sent to an additional seven districts in July 1997. Debriefing interviews were conducted with respondents in August, September and October of 1997. The results of these two pilot tests are summarized below.

Overall Response Rates

The 15 districts in the pilot tests were drawn from nine states (Alabama, Iowa, Maryland, Montana, Nebraska, New Mexico, Washington, and Virginia). School finance personnel in the selected districts volunteered to complete the survey. A calculator was mailed out with each questionnaire, as a token of appreciation for the respondent's participation. Two of the districts had already been involved in the focus group portion of the study. None of these states are among the handful of states that require districts to report school-level finance data.

Five of the eight participants in the first pilot test returned the questionnaires, representing a response rate of 63 percent. AIR staff had hoped for a higher rate of return for the second pilot test, because more time was allowed for questionnaires to be returned and revisions were made to the questionnaire format in an effort to make it more user-friendly. However, only three of the seven participants in the second pilot test returned the questionnaire, representing a response rate of only 43 percent. Overall, the response rate was 53 percent.

The eight respondents and the seven non-respondents were compared, to determine whether there were any differences between them. No differences by region or state were observed. It did appear, however, that large districts were more likely to respond to the survey than smaller districts. The response rate was 40 percent for the five smallest districts in the sample, those with fewer than 5,000 students. It also was 40 percent for the five mid-sized districts, those with between 5,000 and

25,000 students. The response rate was 80 percent, however, for the five districts with 25,000 students or more (see Exhibit IV). Two of the large districts responding to the survey had enrollments of between 70,000 and 90,000 students. Although caution must be taken in extrapolating from a sample size of 15 districts, larger districts appear more likely to respond to this type of finance survey, because of the more sophisticated computerized accounting systems of such districts. This does not mean that smaller districts cannot complete the survey — one of the respondents was the smallest district in the sample, a district with enrollment of 2,000.

EXHIBIT IV

Enrollment of Respondents and Non-Respondents

District Enrollment	Respondents	Non-Respondents	Total
Fewer than 5,000	2	3	5
5,000-24,999	2	3	5
25,000 or more	4	1	5
Total	8	7	15

Across the two pilot tests, a total of seven of the fifteen participants did not respond. Their reasons for not responding were as follows:

- Two participants decided after looking at the questionnaire that it would take too much time to complete. One respondent said it was "doable, but too long." Another respondent, (from a small district with enrollment of 2,700 and only three schools), returned the questionnaire with a cover letter stating that it was more detailed than he had anticipated, and so he did not have time to attempt it, given the shortage of available staff;

- Three participants began completing the questionnaire, but never finished. One said that he had started it, but stopped because it was too long. Two others told AIR staff that they were working on it (and one of them called with questions that indicated he was indeed working on it), but AIR never received forms and later phone calls were not answered;

- One participant never returned AIR's phone calls; and

- One participant said that his district was unable to provide any school-level data, and so he believed it was pointless to fill out any of the questionnaire.

It is worth noting that this last non-respondent had been among the focus group participants who had expressed a "can-do" attitude regarding the survey. Furthermore, he came from a large district with a sophisticated computerized accounting system. When asked to explain the difference between his response at the focus group and his response to the pilot test, the business officer said that although his accounting system should, in theory, be able to provide school-level data, it was not yet able to do so — at least not without more work than he was willing to spend on a voluntary effort.

Another general note on the problem of non-response emerged during conversations with respondents to the first pilot test. Respondents stated that response rates would be higher if the purpose of the survey could be communicated more clearly. Respondents would like explanations of *what* the data will be used for and *how* the district will benefit by responding to the survey.

Most of the districts reported being short-staffed and having a tight cycle of regular deadlines for submitting budgets, issuing regular and ad hoc reports, and closing out the fiscal year. The pilot tests were administered in the spring time and in the summer, when potential respondents were busy with other matters. They noted that the best time for them to respond to the survey would be in the fall, perhaps October, when they would be completing the end-of-the-year reports required by their state education agencies.

Administrative Burden

Because many of the non-respondents expressed concerns about the length of the survey and time needed for response, it is important to examine the amount of time spent by the eight respondents. As shown in the Exhibit V below, there was a wide variation in time spent on survey completion.

EXHIBIT V

Reported Time to Complete Survey

Response Time	First Pilot	Second Pilot	Total	Notes
1 hour	1	—	1	The school-level data in this survey was judged to be of poor quality.
3 to 5 hours	2	1	3	This includes two respondents at 3 hours and one respondent at 4.5 hours.
9 hours	1	1	2	One response was estimated as 9 hours, based on 3 hours for the district data and unknown time on school-level data.
26-30 hours	1	1	2	The longest response — 30 hours — included 24 hours by one employee and 6 hours split across 7 employees.
Total	5	3	8	

The lowest reported response time was one hour. The school-level data provided on the last pages of this survey, however, appeared inconsistent with the district totals in at least one instance, and AIR staff were unable to resolve this inconsistency because of the respondent's request to not be contacted for any follow-up questions.

The most frequently reported response time was 3 hours (2 respondents). A third respondent reported 4.5 hours. These responses were in line with the predictions of the focus group participants, of about half a day or less.

Two other respondents reported spending closer to 9 hours, or slightly more than one day. Of even more concern, two respondents reported spending between 3 and 4 days, totaling the hours spent by each person involved in survey completion. The longest of these response times, 30 hours, included 24 hours spent by one employee who painstakingly printed out the entire district budget, hand-coded each expenditure as falling in one of AIR's function categories, and then totaled expenditures for each function. Seven other employees were involved because the district business officer distributed the survey to the directors of food service, transportation, operations, etc. In hindsight, he concluded that it would have been more efficient if he had looked up the data himself in the annual financial report.

During the debriefing interviews that were conducted by telephone, respondents explained that the most time-consuming part of the survey was splitting expenditures across functions. In particular, respondents found it difficult to report expenditures for instructional support services (libraries, professional development) separately from student support services (health, guidance, attendance). In Arizona, for example, districts are not required to distinguish between such expenditures in their state-mandated financial reports. The respondent that spent 24 hours cross-walking her district's expenditure categories to our categories also had most trouble in the area of instructional and student report. To address this issue, support services for pupils and instructional staff are combined into one category in the revised survey instrument appended to this report. In addition, reference numbers have been added to the functional categories, providing easy reference to the definitions in *Functional Accounting for State and Local School Systems* (NCES, 1990), for the benefit of respondents in districts or states making use of the NCES framework.

Three of the larger districts in the second pilot test were mailed a short supplement along with the regular questionnaire. This supplement requested data for a second selected school. It was included in the second pilot to assess the time needed for a district to provide data for more than one school (as the SASS sampling frame would require of larger districts). Very little pressure was placed on respondents to complete the supplemental form — they were simply asked to look at it if they had time. Two of these three districts were among the non-respondents to the pilot test, the third responded to the basic questionnaire, but not to the supplemental form. Thus no information is available to address the question of the marginal cost, in time, of providing data for more than one school in a district.

Consistency of Reported Data

As a preliminary test of the accuracy of the data submitted by the districts, AIR performed checks for internal consistency. Data in two of the eight surveys passed all checks for data

consistency and thus were judged to be very good in terms of data quality (see Exhibit VI below). One of these surveys was completed in 3 hours; one was completed in 26 hours.

Four of the surveys, or half of the total, were judged to have fairly consistent data, with some mistakes or omissions that could largely be identified and resolved during the follow-up interviews. Some of these errors were transcription errors, such as data reported in the wrong column, or data omitted during compilation of responses from different staff within the district. The questionnaire submitted in Appendix A of this report was re-formatted in an attempt to reduce these types of transcription errors (which were particularly prevalent in the second pilot test, when some respondents were overwhelmed with a questionnaire that requested five columns of data).

EXHIBIT VI

Data Consistency

Data Consistency	First Pilot	Second Pilot	Total	Notes
Poor	1	—	1	– Last three pages of survey had inconsistent data (i.e., equipment expenditures for school higher than equipment expenditures for district).
Fair/Poor	1		1	– Incomplete (missing food service, transportation), did not provide district totals, and made common error of not reporting site-specific data for all schools.
Good/Fair	1	3	4	– Common error of not reporting site-specific data for all schools (2). – Defined principals as instruction in district totals and as administration in school-level data. – Made transcription errors (data in incorrect column, forgot to transcribe food service, only photocopied odd-numbered pages).
Very Good	2		2	– All data appear consistent.
Total	5	3	8	

The remaining two surveys were judged to be of poor or fair/poor quality. One of these surveys was incomplete because AIR staff had urged the respondent to submit the survey "as is" in

order to meet the tight dead-line for the first pilot. In the second case, the survey had been completed in only one hour and the inconsistencies appeared on the last three pages, where the respondent may have been rushed.

Among the six surveys with some level of inconsistency, three made the same common error, concerning the reporting of certain types of school-level data. Specifically, respondents reported school-level data for one selected school, but did not report comparable data for all schools in the district. Because the precise nature of this error is at least partially linked to the specific format of the questionnaire used in the pilot tests, it is not explained in detail here (but is explained, with an example, in Appendix B). The questionnaire submitted with this report has been modified in such a way that respondents are no longer asked to report school-level expenditures reported at specific locations *across all schools*. Further testing of the revised survey instrument will be necessary to determine whether this change, together with the formatting change, results in more consistent data.

Other specific problems encountered by respondents are discussed in more detail in Section IV of this report, which presents an item-by-item discussion of the survey instrument.

IV. Description of Survey Instrument

The purpose of this project was to develop and test an instrument that could be used to collect school-level finance data for the public schools in the SASS sample. This section describes the final version of the questionnaire, attached as Appendix A. The individual items are discussed in the order they appear in the questionnaire, as follows:

- Expenditures by Function and Object: Total District Expenditures, Central-Office Expenditures, and School-Level Expenditures (Items 1-3),
- Equipment: Total District Expenditures, Central-Office Expenditures, and School-Level Expenditures (Items 4- 6),
- Basic Data about District and Selected School (Item 7),

- Benefits and Long-term Debt (Items 8 and 9),
- Grants and Funds Excluded from Items 1-9 (Item 10).

The discussion of each set of items includes a discussion of pilot test findings for earlier versions of these items.

Expenditures by Function and Object: Total, Central-Office, and School-Level Expenditures

Each sampled district is asked to report operating expenditures for the district as a whole in item 1, using AIR's proposed set of function and object categories. In Item 2, districts are asked to report central-office operating expenditures. School-based expenditures are the focus of item 3. For all three items, districts are asked to report wages and salaries in one column, and supplies and contracted services in a second column.

The seven functions used in items 1-3 are drawn from the more detailed set of functions used in the NPEFS and F-33, and defined in *Fundamentals of Financial Accounting for Local and State School Systems* (NCES, 1990). A page of functional definitions is included at the end of the survey, and functional codes provide a reference for districts that are familiar with the NCES accounting system. [11]

Item 1. Total District Expenditures. Functions in item 1 include:

- Instruction (1000),
- Support Services for Pupils and Instructional Staff (2100, 2200),
- Central-Office and School-Based Administration (2300, 2400, 2500, 2800),
- Operations and Maintenance (2600),
- Transportation (2700),

[11] In the March 1997 pilot test survey, functional definitions were embedded in the data tables themselves. Respondents to the first pilot test noted that this made the survey imposing and lengthy. In the June 1997 pilot test version, definitions were provided on pages facing each item. This format led to substantial repetition of instructions for different items. The final version has the definitions at the back of the survey.

- Food Service (3100), and
- Other (2900).

For the first two functional categories, Instruction and Support services for pupils and instructional staff, expenditures are collected for both regular and special education.

Pilot test findings. Seven of the eight respondents reported district-wide total expenditures for most functions, for both salaries and supplies. (The eighth respondent provided the components of expenditures (central-office, school-based, etc.) but did not take the time to sum these into the district-wide totals.)

Six of the eight respondents were able to report salaries for special education teachers separately from salaries for regular education teachers. Five of these six reported salaries for special education support staff separately from regular education support staff. The sixth followed instructions to indicate that special education expenditures for support services were included with regular education expenditures for such services.

Item 2. Central-Office Expenditures. Under Item 2, expenditure data for central-office operations are collected for four of the seven functional categories used in Item 1:

- coordination of support services for instructional staff and pupils,
- administration, including general administration, central administration, business administration, and central support services,
- coordination of operations and maintenance, and
- other central-office expenditures.

Respondents are not asked to report central-office instruction, under the assumption that teaching of students always occurs in schools. The survey also does not ask districts to split transportation and food service between the central-office and school locations. Instead, district totals are collected and future analyses of the data can be made with and without allocating district-wide average expenditures for transportation and food service expenditures to the selected school. In the case of transportation, this decision was made because it is difficult to find common agreement as to how, or even whether, expenditures should be allocated to specific school sites. In the case of food services, only limited information is asked for because these operations are generally funded and accounted for separately from other school operations.

Pilot Test Findings. Six of the eight respondents reported salaries for central-office administration. Only three reported salaries for central-office operations and maintenance and two reported salaries for central-office coordination of support services. It should be noted that responses for these latter two categories may increase in the future, because of improved instructions in the final version of the survey. As expected, there were no reports of central-office instruction. (This item was provided as a potential response in the first two versions of the questionnaire, but is noted as an intentional blank in the final version).

Item 3: School-Level Expenditures. All expenditures other than central office operations are defined as school-based expenditures. To accommodate the diverse capabilities of district accounting systems, school-based expenditures in item 3 are reported in two tables:

- **Table A: Actual Expenditures at Selected School.** Districts are asked to report actual expenditures for the selected school in Table A to the extent that such expenditures are known and tracked to that specific school site. Respondents are instructed to report zeros in Table A if the district's accounting system does not track any expenditures to specific school locations.

- **Table B: Expenditures at Unspecified Locations.** Districts are to use Table B to report any expenditures for school-based services that are not assigned to any particular school or location. This might include itinerant staff (e.g., itinerant music teachers), personnel or materials used in schools on an "as-needed" basis (e.g., psychologists, maintenance workers), or personnel or materials associated with school-based services but which are accounted for under a central office location (e.g., nurses coded to central location, centrally-billed utilities). Table B will include all expenditures other than central office expenditures if a district's accounting system does not track any expenditures to specific school locations.

An estimate of the operating expenditures for a selected school may be obtained by summing the reported under Table A: *Actual Expenditures at the Selected School* and the school's proportional share of overall district expenditures under Table B: *Expenditures at Unspecified Locations*. To ease the burden on responding districts, the questionnaire does not ask the district to carry out the calculations necessary to allocate a share of Table B: *Expenditures at Unspecified Locations* to each target school. Instead, enrollment and other basic data for the district and the selected school are

collected, in item 7, allowing NCES to perform the necessary calculations in a consistent manner during data cleaning and analysis.[12]

Pilot test findings. In general, respondents were able to report school-level data for the specific school. That is, six respondents reported salaries for school-based staff across all functions. Furthermore, all eight respondents reported instructional supplies for the selected school, with slightly smaller numbers reporting expenditures for other types of supplies.

Seven respondents reported salaries for support services at unspecified locations. This fits with our expectation that staff providing such student services as health and psychological services are often used on an "itinerant" or "as needed" basis. Six respondents also reported at least some salaries for instruction, and for operation and maintenance tracked to unspecified locations. Only four respondents reported administrative salaries at unspecified locations, suggesting that school-based administrative staff are more likely to be allocated to specific schools than other types of staff.

Items 4-6: Equipment

The next three items of the questionnaire request information about equipment for the district as a whole (item 4), the central office (item 5), and the selected school (item 6). Respondents are not asked to classify equipment by function, except that respondents are asked to report purchases for "instruction-related computers," separately from other equipment purchases. In item 4 only, they are asked to report total district expenditures for food service and transportation equipment. The advantages of the sub-item on instruction-related computers is that it collects information on a topic of interest to education policy-makers and it is easy for most districts to report.

Pilot test findings. Six of the eight respondents reported instructional computers separately from other equipment for the district as a whole, and four did so for the selected school. One respondent reported that he could not report computers separately from other equipment, and one did not complete the page on equipment.

Item 7: Basic Data about District and Selected School

Item 7 of the questionnaire requests contextual information for the selected SASS school and the district as a whole. Thus, the information can be used to allocate expenditures for specific

[12]Depending on the purpose of the analysis, central-office expenditures can also be allocated to target schools, based on student enrollment or other criteria.

functions, if the district is unable to provide school-level expenditure data. The enrollment data requested can also be used to calculate per-pupil expenditures.

> **Pilot test findings.** All eight respondents reported all basic data as requested (enrollment, number of meals served, square feet, etc.) for both the district and the school. Most of them found this item fairly easy to respond to.[13]

Items 8 and 9: Benefits and Long-term Debt

The next two items also are fairly simple for respondents to complete. Item 8 requests employee benefits across the entire district. Respondents are provided the opportunity of reporting additional benefits paid by the state or local jurisdiction. Item 9 collects the principal and interest expenditures for long-term debt service.

> **Pilot test findings.** All eight respondents reported district-wide benefits. Two respondents reported additional state-funded benefits.
>
> Seven respondents reported principal and interest payments on long-term debt. The eighth respondent reported zero for both principal and interest payments.

Item 10: Grants and Funds Excluded From Items 1-9

Item 10 asks the respondent to report the extent to which expenditures for Title I and other grant-funded programs are included in reported expenditures reported in items 1-9. The pilot test versions of the survey asked only about Title I and other Federal grants; the revised version also asks about state grants, student activity funds, special revenue funds, and other types of funds.

> **Pilot test findings.** Among the eight respondents, three reported that Title I and other Federal grants were included in items 1-9, two reported that some of these expenditures were included, and one reported that none were included. (One respondent checked more than one box and his response could not be interpreted).

[13] In earlier versions of the questionnaire item 7 had been item 1, based on the belief that the collection of non-financial information is less imposing than financial information. Though this may be true for some types of respondents (i.e , private school principals responding to our previously developed private school questionnaire), it did not appear true for district business officers. In fact, the request for non-financial data on transportation, meals served, etc. as the first item in earlier versions appeared to have the unintended consequence of leading respondents to turn to their transportation and food service directors for data that they later realized could have been gathered more cost-effectively through end-of-the year financial reports or the central business office accounting system.

Conclusion

As stated in the first section of this report, the task of designing an instrument to collect detailed, school-level financial information is a challenging one, for several reasons.

- First, the instrument must collect expenditure data by the standard NCES function and object categories, even though many district and state accounting systems do not follow this accounting framework completely.
- Second, the instrument must be able to collect expenditures associated with a selected school — despite the fact that the district-wide accounting systems of many districts do not directly track expenditures to specific school sites.
- Third, the instrument, while providing a thorough picture of school-level expenditures, should not place an undue burden on respondent districts. If the instrument is perceived as too demanding of staff time, then the response rate will suffer, and the overall validity of the instrument will become open to question.

This project has met with mixed success with regard to meeting these three challenges. The first challenge is perhaps the easiest and the one that has been most clearly met. The instrument presented in Appendix A follows a simplified form of the standard NCES categories, and respondents appear able to report expenditures across these categories. It is important to note, however, that comments made during debriefings of the pilot tests suggest that splitting expenditures across the NCES functional categories is a time-consuming task for some respondents. Although modifications made to the final survey — most notably, collapsing two instruction-related support functions into one category — are expected to reduce the time burden, this cannot be determined without further field-testing.

With regard to the critical challenge of collecting school-level data, the instrument has shown that it is possible to collect school-level data across a diverse array of districts. This is an important achievement. AIR's basic approach has been to use a framework that collects several levels of expenditures:

- total district expenditures (which all can report),

- central-office expenditures (which nearly all can report),
- school-level expenditures at the selected school (which can be reported to varying degrees by different districts), and
- school-level expenditures that are not tracked to specific school locations (which can be reported to varying degrees by different districts).

Results from the pilot tests suggest that some districts can report expenditures in this framework without great difficulty. Others, however, found it hard to report the different levels of data in a manner that preserves the internal consistency of the reported data. Again, modifications were made to the final instrument in an effort to improve data consistency, but the success of these modifications cannot be judged until further field-testing.

Finally, in designing an instrument that meets the first two challenges, AIR has been forced to design a fairly complex instrument that creates a burden for the respondent. In fact, several pilot test participants did not complete the survey, because of concerns about survey length and complexity. Moreover, two of the eight participants that did respond spent more than two days in completing the instrument. On the other hand, four of the respondents spent about half a day or less, and the remaining two spent slightly over 8 hours. Although modifications made to the revised instrument are expected to shorten the average response time, perhaps significantly, it is clear that a public expenditure survey of this type places a significant administrative burden on respondents.

The ability of districts to process a financial survey of this type is likely to vary across districts and states. If further field testing finds that the instrument continues to requires more than 8 hours for completion by a significant proportion of respondents, it may be necessary to consider the option of administering the questionnaire to a sub-sample of states, selected for the comparability of the state accounting systems with the NCES framework and the degree of school-level accounting practiced by districts within the state. Another possible option for the future is to replace the paper and pen survey with some form of computer-assisted survey information collection (CASIC), that is,

to use computer technology to modify the instrument so as to improve data consistency and reduce respondent burden.

An increasing number of states and districts are moving toward financial systems that account for expenditures at the school level. Over time, an increasing number of districts should be able to provide complete school-level data without spending undue amounts of time on survey completion. At this point, as states and districts are in the early stages of developing school-level data systems, the attached *Public School Expenditure Survey* offers an instrument for collecting a mixture of district and school-level data that make maximum use of the data available to yield useful information about resource allocations within and across schools.

APPENDIX A

PUBLIC SCHOOL EXPENDITURE SURVEY

American Institutes for Research
1000 Thomas Jefferson Street, N.W., Suite 400
Washington, D.C. 20007

November 1997

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INTRODUCTION

The goal of this survey is to collect expenditure data associated with: *[NAME]*_____, a selected school in your district.

The collection of school-level expenditure data from a sample of schools across the country will yield valuable information about how resources are allocated both among and within schools. All information reported will be treated as confidential and will not be shared with any government agency or individual in any manner that could allow identification of data from an individual school or district.

This survey collects three types of expenditures:

Total District Expenditures

These expenditures include both central-office and school-level expenditures.

Central-Office Expenditures

These expenditures concern activities at the central district office and any sub-district offices, including activities associated with coordination of instruction and support services, general administration, central administration, business administration, and coordination of operations and maintenance.

School-Level Expenditures

All expenditures other than central-office expenditures are defined as school-level expenditures. To accommodate the diverse capabilities of district accounting systems, school-level expenditures are reported in two tables:

Table A: Actual Expenditures at Selected School

Use Table A to report actual expenditures for the selected school to the extent that such expenditures are known and tracked to that specific school site. Report zeros in Table A if your district's accounting system does not track any expenditures to specific school locations.

Table B: Expenditures at Unspecified Locations

Use Table B to report any expenditures for school-level services that are not assigned to any particular school or location. This might include itinerant staff (e.g., itinerant music teachers), personnel or materials used in schools on an "as-needed" basis (e.g., psychologists, maintenance workers), or personnel or materials associated with school-level services but which are accounted for under a central office location (e.g., nurses coded to central location, centrally-billed utilities). Table B will include all expenditures other than central-office expenditures if your district's accounting system does not track expenditures to specific school locations.

A share of Table B expenditures (district-wide expenditures for school-level services at unspecified locations) will later be allocated to the selected school according to mathematical formulas developed from the information provided in item 7. To avoid double-counting, exclude from Table B any types of expenditures that have been reported in Table A.

What to Include:

- ✓ Please include expenditures for all elementary and secondary education instructional programs (prekindergarten through grade 12) including regular education, special education, vocational education, bilingual education, and prekindergarten programs.

- ✓ For items 1-8, please include unduplicated expenditures from the following types of funds -- the general fund, special revenue fund, federal projects fund, food service fund, transportation funds, student activity funds.
    - If it is too difficult to include expenditures from certain funds, you may exclude them and indicate you have done so in the response to item 10.

- ✓ Expenditures from the debt service fund should be reported separately in item 9.

What to Exclude:

- ✓ Exclude non elementary-secondary programs such as adult education programs, community colleges, extended-day programs, swimming pools, or other community service programs. Also exclude expenditures for non-public school programs and enterprise operations such as a bookstore where costs are recouped largely with user charges.

- ✓ Exclude capital projects funds, intra-fund transfers and enterprise operation funds.

Special and Regular Education

- ✓ When reporting expenditure data for salaries of teachers and certain support personnel in items 1-3, please split expenditures between *special education* and *regular education*.

    Special education means instruction and support services specifically designed to meet the needs of a child with a disability. A child with a disability means a child evaluated as having mental retardation, hearing impairments, visual impairments, serious emotional disturbance, orthopedic impairments, autism, traumatic brain injury, or multiple injuries, and who, because of those impairments, needs special education and related services.

    Regular education means all educational programs not in special education, and includes vocational education, compensatory education, bilingual education, gifted and talented education, prekindergarten, cocurricular activities (clubs, athletics), driver education, ROTC, and "alternative education" programs.

If you cannot report separate regular education and special education expenditures as requested, please report all salaries under regular education, and place an "x" on the special education line(s).

ITEM 1: TOTAL DISTRICT EXPENDITURES

For each of the following functional categories, please report expenditures for fiscal year 1996-1997. Report salaries and wages in the first column, and expenditures for supplies and contracted services (including wages and salaries of contractors' employees) in the second column. Do not include expenditures for computers and other equipment, which are reported separately in item 4. Report "0" for any category without expenditures. (Definitions for functional categories 1a-1h appear on page 8. Reference numbers pertain to function codes in *Financial Accounting for State and Local Systems* (National Center for Education Statistics, 1990)).

Item 1.	Salaries and Wages	Supplies and Contracted Services
1a. Instruction (1000) *i. Regular Education* *ii. Special Education*	*i.*_____ *ii.*_____	*For supplies, do not separate regular and special education.*
1b. Support Services for Instructional Staff and Pupils (2100, 2200) *i. Regular Education* *ii. Special Education*	*i.*_____ *ii.*_____	*For supplies, do not separate regular and special education.*
1c. Central and School-Level Administration (2300, 2400, 2500, 2800)		
1d. Operations and Maintenance (2600)		
1e. Transportation Services (2700)		
1f. Food Service (3100)		
1g. Discretionary Funds		
1h. Other (2900)		
1i. District Totals (sum of 1a-ah)		

ITEM 2: CENTRAL-OFFICE EXPENDITURES

For each of the following functional categories, please report central-office expenditures in fiscal year 1996-1997. Report salaries and wages for central-office coordinators, managers, and administrative staff in the first column, and expenditures for associated supplies and contracted services (including wages and salaries of contractors' employees) in the second column. Do not report expenditures for transportation services or food service; these expenditures are reported in item 1 only. Do not include expenditures for computers and other equipment, which are reported separately in item 5. Report "0" for any category without expenditures. (Definitions for functional categories 2a-2f appear on page 8.)

Item 2.	Salaries and Wages	Supplies and Contracted Services
2a. Central-Office Instruction		
2b. Central-Office Coordination of Support for Instructional Staff and Pupils *i. Regular Ed.* *ii. Special Education*	*i.*_____ *ii.*_____	*For supplies, do not separate regular and special education.*
2c. Central-Office Administration (2300, 2500, 2800)		
2d. Central-Office Coordination of Operations and Maintenance		
2e. Other Central-Office Expenditures		
2f. Total Central-Office Expenditures (sum of 2a-2e)		

ITEM 3: SCHOOL-LEVEL EXPENDITURES

For each of the following functional categories, please report school-level expenditures in fiscal year 1996-1997 for the school named on page 1. Report actual expenditures in Table A to the extent that such expenditures are known and tracked to the specific school site. Use Table B to report any expenditures for school-level services that are not tracked to any particular location, as explained on page 1. To avoid double-counting, exclude from Table B any types of expenditures that have been reported in Table A. Report salaries and wages for school-level staff in the first column and expenditures for supplies and contracted services (including wages and salaries of contractors' employees) in the second column. Do not report expenditures for transportation services or food service; these expenditures are reported in item 1 only. Do not include expenditures for computers and other equipment, which are reported in item 6. Report "0" for any category without expenditures. (Definitions for functional categories 3a-3g appear on p. 8).

Item 3. **Table A: Actual Expenditures at Selected School**	Salaries and Wages	Supplies and Contracted Services
3a(A). School-Level Instruction (1000) *i. Regular Education* *ii. Special Education*	i._____ ii._____	*For supplies, do not separate regular and special education.*
3b(A). School-Level Support Services for Instructional Staff and Pupils *i. Regular Education* *ii. Special Education*	i._____ ii._____	*For supplies, do not separate regular and special education.*
3c(A). School-Level Administration (2400)		
3d(A). School-Level Operations and Maintenance		
3e(A). School-Level Discretionary Funds		
3f(A). Other School-Level Expenditures		
3g(A). Total School-Level Expenditures (sum of 3a-3f)		

Item 3. **Table B: Expenditures At Unspecified Locations** **(see Page 1 for definition)**	Salaries and Wages	Supplies and Contracted Services
3a(B). School-Level Instruction (1000) *i. Regular Education* *ii. Special Education*	i._____ ii._____	*For supplies, do not separate regular and special education.*
3b(B). School-Level Support Services for Instructional Staff and Pupils *i. Regular Education* *ii. Special Education*	i._____ ii._____	*For supplies, do not separate regular and special education.*
3c(B). School-Level Administration (2400)		
3d(B). School-Level Operations and Maintenance		
3e(B). School-Level Discretionary Funds		
3f(B). Other School-Level Expenditures		
3g(B). Total School-Level Expenditures, (sum of 3a-3f)		

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ITEM 4: TOTAL DISTRICT EXPENDITURES FOR EQUIPMENT

Please report total district expenditures for equipment in fiscal year 1996-1997. Do not include any expenditures for equipment already reported as "supplies" in items 1-3. Do not include expenditures that are part of a major building renovation or remodeling project.

Item 4.	Definitions	District Total for Equipment
4a. Instruction-related Computers	Include all expenditures for computers and computer-related products, such as software and peripherals used in instruction and instructional support. Include computers in classrooms, media centers, and computer labs.	
4b. All Other Equipment, Except Food Service and Transportation Equipment	Include non-computer equipment used for instruction, (such as classroom furniture and science laboratory equipment), administrative computers, and *all* equipment used for support services, administration, and operations and maintenance.	
4c. Discretionary Funds for Equipment	Include equipment that may fall into one of the above categories, but cannot be specified, such as discretionary equipment funds for specific schools.	
4d. Food Service	Include kitchen equipment and other equipment used for food service.	
4e. Transportation	Include busses and other equipment used for transportation.	
4f. Total Equipment (sum of 4a-4e)	Sum of 4a-4e.	

ITEM 5: CENTRAL-OFFICE EXPENDITURES FOR EQUIPMENT

Please report central-office expenditures for equipment in fiscal year 1996-1997. All equipment should be reported under 5b.

Item 5.	Definitions	Central-Office Equipment
5a. Instruction-related Computers		
5b. All Other Equipment, Except Food Service and Transportation Equipment	Include administrative computers and all other equipment used in the central office.	

ITEM 6: SCHOOL-LEVEL EXPENDITURES FOR EQUIPMENT

Please report expenditures for equipment for the school named on page 1. Report actual expenditures for fiscal year 1996-1997 in Column A to the extent that such expenditures are known and tracked to the specific school site. Use Column B to report any expenditures for school-level services that are not tracked to any particular location, as explained on page 1. Do not include any expenditures for equipment already reported as "supplies" in items 1-3. Do not include expenditures that are part of a major building renovation or remodeling project. Use same definitions as in item 4.

Item 6.	A. Actual Expenditures at Selected School	B. Expenditures at Unspecified Locations
6a. Instructional Computers (see definition for item 4a)		
6b. Discretionary Funds for Equipment (see definition for item 4b)		
6c. All Other Equipment, Except Food Service and Transportation Equipment (see definition for item 4c)		
6d. Total Equipment (sum of 6a-6c)		

ITEM 7: BASIC DATA ON DISTRICT AND SELECTED SCHOOL

Please provide estimates for the requested information for school year 1996-1997. To the extent possible, report enrollment and other counts around October 1, 1996. You may use point-in-time counts or average daily counts for items, as long as the same types of counts are used for both the district and the selected school so that accurate school/district ratios may be calculated.

Item 7.	Entire District	Selected School
7a. Student enrollment (including prekindergarten)*		
7b. Number of students receiving special education services		
7c. Number of students transported to school		
7d. Number of school meals served (average daily)		
7e. Number of full-time equivalent (FTE) teachers		
7f. Square feet of space in school building		
7g. Amount of Title I expenditures (enter '?' if unknown)		

*Include prekindergarten enrollments for all programs that are funded by the expenditures reported in item 1-6.

ITEM 8: EMPLOYEE BENEFITS (District total)

For each of the benefit categories, please report benefits paid to all central-office and school-level employees including food service and transportation service employees. Include payroll taxes, retirement, medical, dental, disability, unemployment, life insurance, and all other fringe benefits.

Include benefits paid by the district in item 8a. For items 8b and 8c, please indicate in the check boxes provided if any benefits are paid for by the specified level of government, and state the amount of benefits provided.

Item 8.	Amount
8a. Benefits paid by the school district.	
8b. Benefits paid by the state? ❑ Yes ❑ No If yes, please enter the amount to the right *(enter '?' if unknown).*	
8c. Benefits paid by the city or county? ❑ Yes ❑ No If yes, please enter the amount to the right *(enter '?' if unknown).*	
8d. Total benefits	

ITEM 9: LONG-TERM DEBT (DISTRICT TOTAL)

Please report principal and interest for redemption of bonds and other long-term debt. Do not include any expenditures for interest or repayment of principal already included in previous items.

Item 9.	Payments
9a. Principal	
9b. Interest	
9c. Total payments	

ITEM 10: EXPENDITURES EXCLUDED FROM ITEMS 1-9

Ideally, you have reported expenditures from all funds indicated on page 1 (general, special revenue, Federal projects, food service, student activity funds for items 1-6, and debt service for item 9). It is possible, however, that your accounting system makes it difficult to report certain types of expenditures by the categories requested in items 1-9. For each of the five types of grants or funds below, please indicate the extent to which you have reported its associated expenditures in items 1-9 of this survey (check one column per row).

	(a) All expenditures included.	(b) Some expenditures included.	(c) No expenditures included.	(d) NA No such program.	Expenditures excluded from items 1-9 if (b) or (c).
10a. Title I Expenditures	[ ]	[ ]	[ ]	[ ]	$_____
10b. Expenditures Associated with Other Federal Grants (Children with disabilities, Eisenhower professional development, Drug-free schools, vocational education, Impact aid, bilingual education, Indian education, other Federal aid)	[ ]	[ ]	[ ]	[ ]	$_____
10c. Expenditures Associated with State Grants	[ ]	[ ]	[ ]	[ ]	$_____
10d. Expenditures from Student Activity Funds	[ ]	[ ]	[ ]	[ ]	$_____
10e. Expenditures from Special Revenue Funds (state type) _____	[ ]	[ ]	[ ]	[ ]	$_____

ITEM 11: ESTIMATED TIME

Not counting interruptions, how long did it take to complete this questionnaire? _____ hours and _____ minutes

THANK YOU FOR YOUR COOPERATION!

DEFINITIONS OF FUNCTIONS USED IN ITEMS 1-3

Item 1 - District Totals	Item 2 - Central-Office Expenditures	Item 3 - School-Level Expenditures
1a. Instruction (1000). See school-level definition(3a).	2a. Central-Office Instruction. None.	3a. (A and B) Instruction. Include teachers in all subject areas, as well as coaches, teacher aides, substitute teachers, itinerant teachers, and academic department heads not classified as administrators. *Under special education, report special education teachers and teacher aides.* Include supplies and contracted services used for instruction, such as textbooks, instructional materials, musical instruments, athletic supplies, and subscriptions. Also include student-related activities, such as the school newspaper, yearbook, theater, band, assemblies, and trips.
1b. Support Services for Instructional Staff and Pupils (2100, 2200) Definition includes central-office coordination (2b) and school-level services (3b).	2b. Central-Office Coordination of Support for Instructional Staff and Pupils. Include district-level curriculum coordinators and coordinators of professional development, library, media and technology systems, counseling, health services, attendance and social work, psychological and educational testing. *Under special education, report coordinators of special education services and coordinators of assistive technology.* Include supplies and contracted services associated with coordination of all support services described above.	3b. (A and B). School-Level Support Services for Instructional Staff and Pupils. Include librarians and staff providing other media services, technology services, counseling, health services, attendance and social work, psychological, and educational testing services for regular education students. *Under special education, report speech pathologists and audiologists, therapists, and staff providing psychological, diagnostic, and testing services for special education students.* Include supplies and contracted services associated with all support services described above (e.g., libraries, counseling, health services). Also include support to teaching staff, including professional development and conference attendance.
1c. Central-Office and School-Level Administration (2300, 2400, 2500, 2800) Definition includes central-office administration (2c) and school-level administration (3c).	2c. Central-Office Administration. Include General Administration (the superintendent, assistant superintendents, Board of Education services), Business Administration (fiscal, purchasing), and Central Support Services (planning, information systems, staff recruitment and placement, data processing) and other central office and sub-district office administrative staff. Include all administrative supplies and contracted services associated with central office administration, including telephone, printing, postage, office equipment rental, fiscal services, purchasing, legal services, insurance other than plant-related insurance, service contracts, community relations, the Board of Education, and other administrative expenditures	3c. (A and B). School-Level Administration. Include principals and assistant principals, as well as clerical and secretarial staff. Include all administrative supplies and contracted services associated with school-level administration, including telephone, printing, postage, office equipment rental, insurance other than plant-related insurance, service contracts, and other administrative expenditures.

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Item 1 - District Totals	Item 2 - Central-Office Expenditures	Item 3 - School-Level Expenditures
1d. Operations and Maintenance (2600). Include central-office management (2d) and school-level operations (3d).	2d. Central Office Operations and Maintenance. Include district-level managers of operations and maintenance.	3d. (A and B). School-Level Operations and Maintenance. Include custodians, engineers, security, other plant and grounds maintenance personnel.
	Include supplies associated with operation and maintenance of central district office facilities.	Include all supplies and contracted services for operations and maintenance, including utilities, maintenance materials, custodial supplies, contracted custodial and maintenance services, security services, and plant-related insurance.
1e. Transportation (2700). Include bus drivers, transportation service managers, and all other paid employees associated with all transportation services, including transportation of special education students.		
Include fuel, contracted services, and all other supplies associated with all transportation services, including transportation of special education students.		Expenditures for transportation and food service functions are not split between central-office and school-level locations in this survey.
1f. Food Service (3100). Include cafeteria workers, food service managers, and all other paid employees associated with all food services.		
Include food, contracted services, paper supplies, and all other supplies associated with all food services.		
1g. Discretionary Funds. See school-level definition (3e).	2e. Central-Office Discretionary Funds. None.	3e. (A and B). School-Level Discretionary Funds. Include expenditures that may fall into one of the above categories, but cannot be specified, such as supply budgets for specific schools.
1h. Other Support Services (2900). Definition includes other central-office (2f) and school-level expenditures (3f) for support services.	2f. Other Central-Office Support Services. Include any other central-office staff not reported above, but do not include staff of transportation, food service, extended day or other community services, adult education, or enterprise programs.	3f. Other School-Level Support Services. Include any other school-level staff, but do not include staff of transportation, food service, extended day or other community services, adult education, or enterprise programs.
	Report any other expenditures for central-office supplies and services. Do not include employee benefits or long-term debt-service.	Report all other expenditures for supplies and services.

APPENDIX B

APPENDIX B

EXPLANATION OF COMMON ERROR CAUSING DATA INCONSISTENCY

In analyzing the data gathered from the eight respondents, AIR staff found that several surveys had missing or inconsistent data. The most common error involved reporting certain types of school-level data.

The first two versions of the survey required districts to report five columns of data as follows:

1) Total district expenditures (sum of A, B, C, below)

2) Components of total district expenditures:

   A. Central-office expenditures[1]

   B. School-level expenditures at unspecified locations (across the entire district)

   C. School-level expenditures at specified locations (across all schools in the district)

3) Expenditures for the Selected School

   C'. School-level expenditures at the selected school

The reason for collecting these different levels of data was to enable NCES to report an estimate of total school-level expenditures at the selected school by adding an allocated portion of column B expenditures (expenditures at unspecified locations, e.g., itinerant teachers, centrally-billed utilities) to the reported expenditures under column C'. AIR staff initially believed that the best way to get an accurate report of column B, (expenditures at unspecified locations), was to require it to be reported

[1]These were termed "district-level" expenditures in the first two surveys, a terminology which was dropped in the final version to minimize confusion between total district expenditures and central-office expenditures for district-wide coordination.

concurrently with the other components of total district expenditures – column A (central-office expenditures) and column C (school-level expenditures at specified locations).

There were a number of problems with this approach, however. One problem was that the collection of five different columns of data resulted in an imposing data collection instrument. A more serious problem, however, was that in order for the data to be internally consistent, the respondent must define A, B, and C consistently such that:

- Total = A+B+C and
- C' is a subset of C, defined in the same way.

Several pilot test participants, however, submitted inconsistent data. The most common problem concerned column C, site-specific expenditure data across all schools in the district. Many respondents left column C blank, yet reported expenditures for column C'.

To understand the implications of this common error, it is helpful to consider an example. Assume that Middletown District has the following:

$1,000,000 in total teacher salaries, consisting of:

$0 in central-office teacher salaries

$100,000 in itinerant teacher salaries, and

$900,000 in teacher salaries at specific schools, including

$200,000 at Field School, a local school with 1/4 of the district enrollment.

The common error would be to report the entire $1,000,000 under column B, as salaries at unspecified locations, and to report no salaries at specific schools, while reporting $200,000 at Field School. Such reporting would lead to incorrect estimates of salaries for Field School, as shown in Exhibit B-1, below.

EXHIBIT B-1

Example Exhibiting Common Error in Data Consistency

SALARIES AND WAGES ITEM FROM SECOND PILOT TEST

Function	Total (sum of Columns A - C)	COMPONENTS OF TOTAL EXPENDITURES			C1
		A	B	C	
		District-level expenditures (Central-office)	School-level expenditures reported at the *district level*	School-level expenditures reported at the *school level*	School-level expenditures at the *selected school*
CORRECT RESPONSE:					
2a. Instruction			***Regular Education***		
	1,000,0000	0	100,000 itinerants	900,000 at local schools	200,000 at Field School
COMMON ERROR:					
2a. Instruction			***Regular Education***		
	1,000,000	0	1,000,000 all types of teachers	—	200,000 at Field School

Implications of Common Error for Estimates of Field School Teacher Expenditures

Assume Field School has ¼ of district enrollment, and is therefore allocated with ¼ of itinerant salaries:

Using data submitted under correct response, Field School teacher salaries = $200,000 + ¼($100,000), or $200,000 + $25,000, or $225,000.
Under common error, Field School teacher salaries = $200,000 + ¼ ($1,000,000), or $200,000+$250,000, or $450,000.

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Among the eight pilot test respondents, three provided data in the format requested (as in the "correct response" of Exhibit B-1), and three respondents made the common error of providing no site-specific data for the entire district, yet reporting salaries for the selected school, as in the second example shown in Exhibit B-1. The remaining two respondents did not provide any site-specific data.[2]

Some of the sources of inconsistent data are addressed in the final version of the survey. Most significantly, what had been Column C is eliminated, and the questionnaire no longer asks for school-level expenditures reported at specified locations across all schools. That is, the final version of questionnaire, as described in more detail in Section IV of this report, collects data on total district expenditures, central-office expenditures, expenditures at the selected school, and expenditures at unspecified locations. At the same time, the questionnaire was re-formatted in an attempt to avoid the types of transcription errors that occurred in the second pilot test, when some respondents were overwhelmed with five columns of data. Further testing of the final instrument will be necessary to determine whether those changes result in more consistent data.

[2]Despite being unable to provide school-level data, these latter two respondents did in fact fill out the survey correctly. If the fictitious Middletown district were in this situation, for example, it would report $1,000,000 in salaries at unspecified locations, and no salaries allocated to the selected school. An analyst would allocate the district-wide average per-pupil expenditure to Field School, which with ¼ of the district enrollment, would be assumed to have $250,000. Analysts would have to note that this estimate was based on the district-wide average, which hides all the school-level variation under study.

Listing of NCES Working Papers to Date

Please contact Ruth R. Harris at (202) 219-1831
if you are interested in any of the following papers

Number	Title	Contact
94-01 (July)	Schools and Staffing Survey (SASS) Papers Presented at Meetings of the American Statistical Association	Dan Kasprzyk
94-02 (July)	Generalized Variance Estimate for Schools and Staffing Survey (SASS)	Dan Kasprzyk
94-03 (July)	1991 Schools and Staffing Survey (SASS) Reinterview Response Variance Report	Dan Kasprzyk
94-04 (July)	The Accuracy of Teachers' Self-reports on their Postsecondary Education: Teacher Transcript Study, Schools and Staffing Survey	Dan Kasprzyk
94-05 (July)	Cost-of-Education Differentials Across the States	William Fowler
94-06 (July)	Six Papers on Teachers from the 1990-91 Schools and Staffing Survey and Other Related Surveys	Dan Kasprzyk
94-07 (Nov.)	Data Comparability and Public Policy: New Interest in Public Library Data Papers Presented at Meetings of the American Statistical Association	Carrol Kindel
95-01 (Jan.)	Schools and Staffing Survey: 1994 Papers Presented at the 1994 Meeting of the American Statistical Association	Dan Kasprzyk
95-02 (Jan.)	QED Estimates of the 1990-91 Schools and Staffing Survey: Deriving and Comparing QED School Estimates with CCD Estimates	Dan Kasprzyk
95-03 (Jan.)	Schools and Staffing Survey: 1990-91 SASS Cross-Questionnaire Analysis	Dan Kasprzyk
95-04 (Jan.)	National Education Longitudinal Study of 1988: Second Follow-up Questionnaire Content Areas and Research Issues	Jeffrey Owings
95-05 (Jan.)	National Education Longitudinal Study of 1988: Conducting Trend Analyses of NLS-72, HS&B, and NELS:88 Seniors	Jeffrey Owings

Listing of NCES Working Papers to Date--Continued

Number	Title	Contact
95-06 (Jan.)	National Education Longitudinal Study of 1988: Conducting Cross-Cohort Comparisons Using HS&B, NAEP, and NELS:88 Academic Transcript Data	Jeffrey Owings
95-07 (Jan.)	National Education Longitudinal Study of 1988: Conducting Trend Analyses HS&B and NELS:88 Sophomore Cohort Dropouts	Jeffrey Owings
95-08 (Feb.)	CCD Adjustment to the 1990-91 SASS: A Comparison of Estimates	Dan Kasprzyk
95-09 (Feb.)	The Results of the 1993 Teacher List Validation Study (TLVS)	Dan Kasprzyk
95-10 (Feb.)	The Results of the 1991-92 Teacher Follow-up Survey (TFS) Reinterview and Extensive Reconciliation	Dan Kasprzyk
95-11 (Mar.)	Measuring Instruction, Curriculum Content, and Instructional Resources: The Status of Recent Work	Sharon Bobbitt & John Ralph
95-12 (Mar.)	Rural Education Data User's Guide	Samuel Peng
95-13 (Mar.)	Assessing Students with Disabilities and Limited English Proficiency	James Houser
95-14 (Mar.)	Empirical Evaluation of Social, Psychological, & Educational Construct Variables Used in NCES Surveys	Samuel Peng
95-15 (Apr.)	Classroom Instructional Processes: A Review of Existing Measurement Approaches and Their Applicability for the Teacher Follow-up Survey	Sharon Bobbitt
95-16 (Apr.)	Intersurvey Consistency in NCES Private School Surveys	Steven Kaufman
95-17 (May)	Estimates of Expenditures for Private K-12 Schools	Stephen Broughman
95-18 (Nov.)	An Agenda for Research on Teachers and Schools: Revisiting NCES' Schools and Staffing Survey	Dan Kasprzyk
96-01 (Jan.)	Methodological Issues in the Study of Teachers' Careers: Critical Features of a Truly Longitudinal Study	Dan Kasprzyk

Listing of NCES Working Papers to Date--Continued

Number	Title	Contact
96-02 (Feb.)	Schools and Staffing Survey (SASS): 1995 Selected papers presented at the 1995 Meeting of the American Statistical Association	Dan Kasprzyk
96-03 (Feb.)	National Education Longitudinal Study of 1988 (NELS:88) Research Framework and Issues	Jeffrey Owings
96-04 (Feb.)	Census Mapping Project/School District Data Book	Tai Phan
96-05 (Feb.)	Cognitive Research on the Teacher Listing Form for the Schools and Staffing Survey	Dan Kasprzyk
96-06 (Mar.)	The Schools and Staffing Survey (SASS) for 1998-99: Design Recommendations to Inform Broad Education Policy	Dan Kasprzyk
96-07 (Mar.)	Should SASS Measure Instructional Processes and Teacher Effectiveness?	Dan Kasprzyk
96-08 (Apr.)	How Accurate are Teacher Judgments of Students' Academic Performance?	Jerry West
96-09 (Apr.)	Making Data Relevant for Policy Discussions: Redesigning the School Administrator Questionnaire for the 1998-99 SASS	Dan Kasprzyk
96-10 (Apr.)	1998-99 Schools and Staffing Survey: Issues Related to Survey Depth	Dan Kasprzyk
96-11 (June)	Towards an Organizational Database on America's Schools: A Proposal for the Future of SASS, with comments on School Reform, Governance, and Finance	Dan Kasprzyk
96-12 (June)	Predictors of Retention, Transfer, and Attrition of Special and General Education Teachers: Data from the 1989 Teacher Followup Survey	Dan Kasprzyk
96-13 (June)	Estimation of Response Bias in the NHES:95 Adult Education Survey	Steven Kaufman
96-14 (June)	The 1995 National Household Education Survey: Reinterview Results for the Adult Education Component	Steven Kaufman

Listing of NCES Working Papers to Date--Continued

Number	Title	Contact
96-15 (June)	Nested Structures: District-Level Data in the Schools and Staffing Survey	Dan Kasprzyk
96-16 (June)	Strategies for Collecting Finance Data from Private Schools	Stephen Broughman
96-17 (July)	National Postsecondary Student Aid Study: 1996 Field Test Methodology Report	Andrew G. Malizio
96-18 (Aug.)	Assessment of Social Competence, Adaptive Behaviors, and Approaches to Learning with Young Children	Jerry West
96-19 (Oct.)	Assessment and Analysis of School-Level Expenditures	William Fowler
96-20 (Oct.)	1991 National Household Education Survey (NHES:91) Questionnaires: Screener, Early Childhood Education, and Adult Education	Kathryn Chandler
96-21 (Oct.)	1993 National Household Education Survey (NHES:93) Questionnaires: Screener, School Readiness, and School Safety and Discipline	Kathryn Chandler
96-22 (Oct.)	1995 National Household Education Survey (NHES:95) Questionnaires: Screener, Early Childhood Program Participation, and Adult Education	Kathryn Chandler
96-23 (Oct.)	Linking Student Data to SASS: Why, When, How	Dan Kasprzyk
96-24 (Oct.)	National Assessments of Teacher Quality	Dan Kasprzyk
96-25 (Oct.)	Measures of Inservice Professional Development: Suggested Items for the 1998-1999 Schools and Staffing Survey	Dan Kasprzyk
96-26 (Nov.)	Improving the Coverage of Private Elementary-Secondary Schools	Steven Kaufman
96-27 (Nov.)	Intersurvey Consistency in NCES Private School Surveys for 1993-94	Steven Kaufman

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Number	Title	Contact
96-28 (Nov.)	Student Learning, Teaching Quality, and Professional Development: Theoretical Linkages, Current Measurement, and Recommendations for Future Data Collection	Mary Rollefson
96-29 (Nov.)	Undercoverage Bias in Estimates of Characteristics of Adults and 0- to 2-Year-Olds in the 1995 National Household Education Survey (NHES:95)	Kathryn Chandler
96-30 (Dec.)	Comparison of Estimates from the 1995 National Household Education Survey (NHES:95)	Kathryn Chandler
97-01 (Feb.)	Selected Papers on Education Surveys: Papers Presented at the 1996 Meeting of the American Statistical Association	Dan Kasprzyk
97-02 (Feb.)	Telephone Coverage Bias and Recorded Interviews in the 1993 National Household Education Survey (NHES:93)	Kathryn Chandler
97-03 (Feb.)	1991 and 1995 National Household Education Survey Questionnaires: NHES:91 Screener, NHES:91 Adult Education, NHES:95 Basic Screener, and NHES:95 Adult Education	Kathryn Chandler
97-04 (Feb.)	Design, Data Collection, Monitoring, Interview Administration Time, and Data Editing in the 1993 National Household Education Survey (NHES:93)	Kathryn Chandler
97-05 (Feb.)	Unit and Item Response, Weighting, and Imputation Procedures in the 1993 National Household Education Survey (NHES:93)	Kathryn Chandler
97-06 (Feb.)	Unit and Item Response, Weighting, and Imputation Procedures in the 1995 National Household Education Survey (NHES:95)	Kathryn Chandler
97-07 (Mar.)	The Determinants of Per-Pupil Expenditures in Private Elementary and Secondary Schools: An Exploratory Analysis	Stephen Broughman
97-08 (Mar.)	Design, Data Collection, Interview Timing, and Data Editing in the 1995 National Household Education Survey	Kathryn Chandler

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Number	Title	Contact
97-09 (Apr.)	Status of Data on Crime and Violence in Schools: Final Report	Lee Hoffman
97-10 (Apr.)	Report of Cognitive Research on the Public and Private School Teacher Questionnaires for the Schools and Staffing Survey 1993-94 School Year	Dan Kasprzyk
97-11 (Apr.)	International Comparisons of Inservice Professional Development	Dan Kasprzyk
97-12 (Apr.)	Measuring School Reform: Recommendations for Future SASS Data Collection	Mary Rollefson
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97-15 (May)	Customer Service Survey: Common Core of Data Coordinators	Lee Hoffman
97-16 (May)	International Education Expenditure Comparability Study: Final Report, Volume I	Shelley Burns
97-17 (May)	International Education Expenditure Comparability Study: Final Report, Volume II, Quantitative Analysis of Expenditure Comparability	Shelley Burns
97-18 (June)	Improving the Mail Return Rates of SASS Surveys: A Review of the Literature	Steven Kaufman
97-19 (June)	National Household Education Survey of 1995: Adult Education Course Coding Manual	Peter Stowe
97-20 (June)	National Household Education Survey of 1995: Adult Education Course Code Merge Files User's Guide	Peter Stowe
97-21 (June)	Statistics for Policymakers or Everything You Wanted to Know About Statistics But Thought You Could Never Understand	Susan Ahmed
97-22 (July)	Collection of Private School Finance Data: Development of a Questionnaire	Stephen Broughman

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97-23 (July)	Further Cognitive Research on the Schools and Staffing Survey (SASS) Teacher Listing Form	Dan Kasprzyk
97-24 (Aug.)	Formulating a Design for the ECLS: A Review of Longitudinal Studies	Jerry West
97-25 (Aug.)	1996 National Household Education Survey (NHES:96) Questionnaires: Screener/Household and Library, Parent and Family Involvement in Education and Civic Involvement, Youth Civic Involvement, and Adult Civic Involvement	Kathryn Chandler
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97-32 (Oct.)	Innovative Solutions to Intractable Large Scale Assessment (Problem 2: Background Questionnaires)	Steven Gorman
97-33 (Oct.)	Adult Literacy: An International Perspective	Marilyn Binkley
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97-35 (Oct.)	Design, Data Collection, Interview Administration Time, and Data Editing in the 1996 National Household Education Survey	Kathryn Chandler
97-36 (Oct.)	Measuring the Quality of Program Environments in Head Start and Other Early Childhood Programs: A Review and Recommendations for Future Research	Jerry West

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Number	Title	Contact
97-37 (Nov.)	Optimal Rating Procedures and Methodology for NAEP Open-ended Items	Steven Gorman
97-38 (Nov.)	Reinterview Results for the Parent and Youth Components of the 1996 National Household Education Survey	Kathryn Chandler
97-39 (Nov.)	Undercoverage Bias in Estimates of Characteristics of Households and Adults in the 1996 National Household Education Survey	Kathryn Chandler
97-40 (Nov.)	Unit and Item Response Rates, Weighting, and Imputation Procedures in the 1996 National Household Education Survey	Kathryn Chandler
97-41 (Dec.)	Selected Papers on the Schools and Staffing Survey: Papers Presented at the 1997 Meeting of the American Statistical Association	Steve Kaufman
97-42 (Jan. 1998)	Improving the Measurement of Staffing Resources at the School Level: The Development of Recommendations for NCES for the Schools and Staffing Survey (SASS)	Mary Rollefson
97-43 (Dec.)	Measuring Inflation in Public School Costs	William J. Fowler, Jr.
97-44 (Dec.)	Development of a SASS 1993-94 School-Level Student Achievement Subfile: Using State Assessments and State NAEP, Feasibility Study	Michael Ross
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